

# APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03919

SHEET 1 OF 1

DWG NO. 647.1300

REV: A

PREPARED BY:

J. BECKER

DATE: 07/05/13

EFFECT ON DWG  
☒ INC. ☐ UNINC.

DWG TITLE: EC145 CABLE CUTTERS KIT

APPROVED BY:

ENGR *[Signature]*

MFG

*[Signature]*

QC

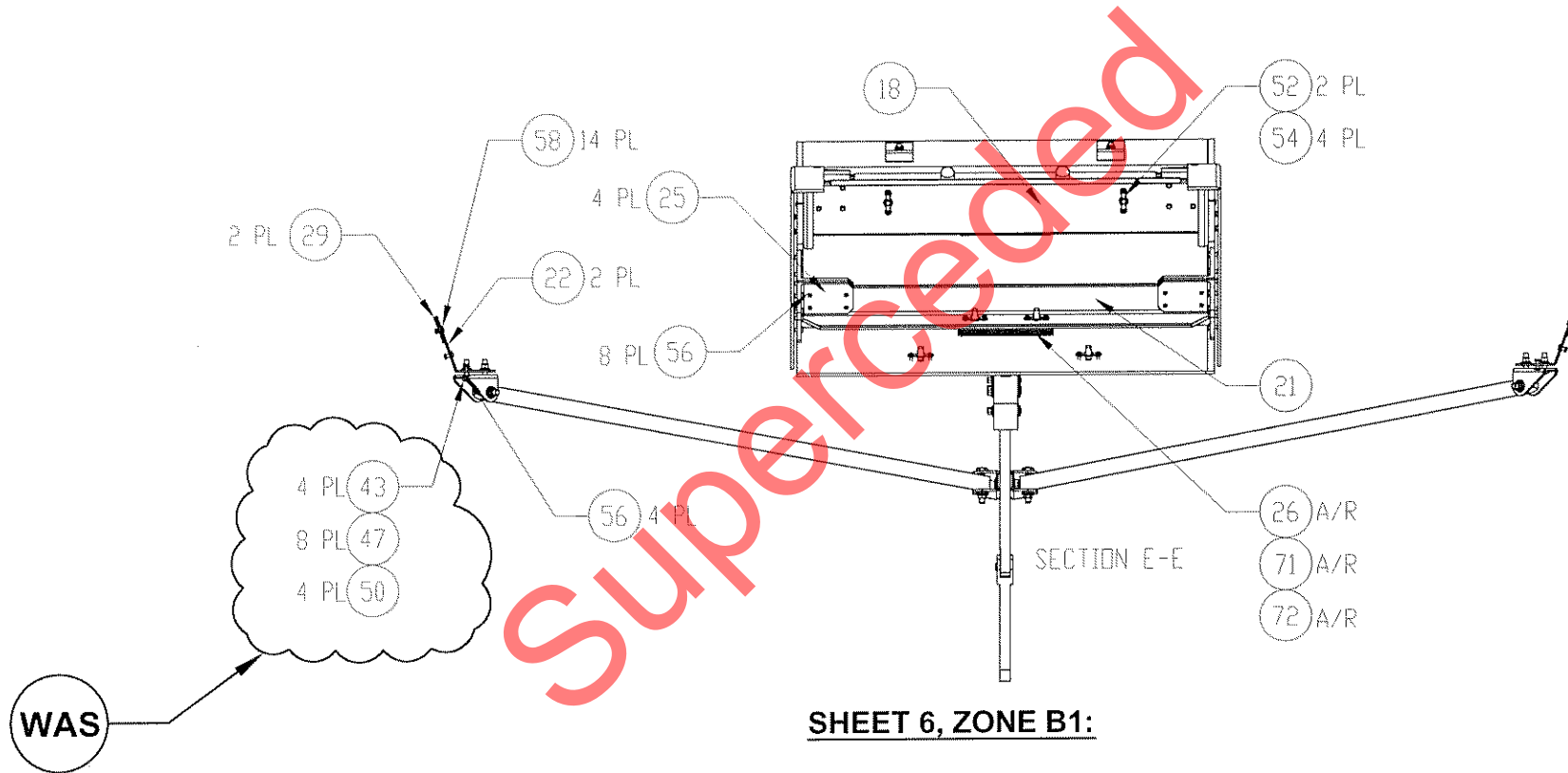
*[Signature]*

EFF:

NEXT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: ADDED CONFIGURATIONS .1304, .1305, .1306. REVISED BOM. SEE DRAWING.  
ADDED SHEETS 8 & 9. ADDED F/N'S 76-85. ADDED NOTES 4, 5, & 6.



**SHEET 6, ZONE B1:**

	C	647.1306	<div></div>	<div></div>	<div></div>	FIXED PROVISIONS KIT U CHANNEL		
	C	647.1305	<div></div>	<div></div>	<div></div>	REMOVABLE PROVISIONS KIT U CHANNEL		
	C	647.1304	<div></div>	<div></div>	<div></div>	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE		
F/N	TC	PART NUMBER	.1306	.1305	.1304	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY					
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED
<div><input type="checkbox"/> MDL   <input type="checkbox"/> INSTALL INSTRUC   <input type="checkbox"/> ICA   <input checked="" type="checkbox"/> BOM</div>							<div><input type="checkbox"/> MAJOR   <input checked="" type="checkbox"/> MINOR</div>	<div><input type="checkbox"/> YES   <input checked="" type="checkbox"/> NO</div>

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NOTES: UNLESS OTHERWISE SPECIFIED

1 AFTER INSTALLATION, APPLY F/N 73 A/R TO FILL GAPS AND FILLET EDGES

2. APPLY F/N 74 TO FAYING SURFACES

3 AT CUSTOMERS OPTION, INSTALL F/N 77 BY MATCH DRILLING ONTO F/N 1

4 INSTALL FOR 647.1301, 647.1302.

5 INSTALL FOR 647.1304, 647.1305.

6 APPLICABLE WHEN EUROCOPTER P/N 145-250014.11 IS INSTALLED WITH EUROCOPTER CABLE CUTTER FIXED PROVISIONS.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PR3		N/C
N/C	INITIAL RELEASE	08/05/09	P. BRAVO
A	INCORPORATED ECN 02963, 03020, 03048	01/25/11	P. BRAVO
B	INCORPORATED ECN 03919	07/05/13	P. BRAVO

13		13	13		13	26	647.1812	SHIM		
4		4	4		4	25	647.1910	CLIP		
1		1	1		1	24	647.1810	NOSE DOOR DOUBLER		
1		1	1		1	23	647.1818	NOSE DOOR SPACER		
2		2	2		2	22	647.1813	ANGLE		
1		1	1		1	21	647.1913	TEE		
1		1	1		1	20	647.1814	GUSSET, LH		
1		1	1		1	19	647.1815	GUSSET, RH		
1		1	1		1	18	647.1915	SUPPORT ANGLE		
	2	2		2	2	17	647.2011	LOWER STRUT		
1		1	1		1	16	647.1914	BRACKET		
1		1	1		1	15	647.1816	SUPPORT, LH		
1		1	1		1	14	647.1817	SUPPORT, RH		
1		1	1		1	13	647.1912	BRACKET, LH		
1		1	1		1	12	647.1911	BRACKET, RH		
4		4	4	4	8	11	647.0112	STRUT BRACKET		
				1	1	10	647.2110	LOWER RAIL		
			1		1	9	647.2111	UPPER RAIL		
1		1	1		1	8	647.1610	WIPER DEFLECTOR, FWD		
1		1	1		1	7	647.1601	WIPER DEFLECTOR ASSY, AFT		
				2	2	6	647.1701	SKID DEFLECTOR ASSY		
1		1	1		1	5	647.3201	GROUNDING CABLE ASSY		
1		1	1		1	4	647.2201	CROSS ASSY		
1		1	1		1	3	647.1602	DOUBLER ASSY		
	1	1		1	1	2	647.1402	CUTTER ASSY (LOWER)		
				1	1	1	647.1401	CUTTER ASSY (UPPER)		
X	X						647.1306	FIXED PROVISIONS KIT U CHANNEL		
	X						647.1305	REMOVABLE PROVISIONS KIT U CHANNEL		6
		X					647.1304	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE		6
			X				647.1303	FIXED PROVISIONS KIT		
				X			647.1302	REMOVABLE PROVISIONS KIT		
					X		647.1301	EC145 CABLE CUTTERS KIT		
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

BOM Table(Restructured)

QTY		PARTS LIST			
NEXT ASSY (S)		ORIGINAL DATE (MO-DA-YR) 07/06/09	<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300  <b>EC145 CABLE CUTTERS KIT</b>		
		DRAWN BY R. ROSANO			
		CHECKER D. BARKER			
		DRAWING APPROVAL P. BRAVO 08/05/09			
		CONTRACT NO.			
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°	SIZE B	CAGE CODE 07MZ6	DWG. NO. <b>647.1300</b>
			SCALE NONE		REV. B
			SHEET 1 OF 9		

1

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A

B

C

D

	2	2				85	647.1702	SKID DEFLECTOR ASSY		
	1	1				84	647.2113	LOWER RAIL (U CHANNEL KIT)		
	8	8				83	601.3655	WASHER	LN9025-0820K	
	8	8				82	601.3654	SCREW	LN9037-8018	
1		1				81	647.2112	UPPER U CHANNEL		
	4	4				80	601.3653	WASHER	93475A270	
	2	2				79	601.3652	LOCKNUT	93625A300	
	2	2				78	601.3651	SCREW	91292A080	
	1	1				77	647.1403	CUTTER ASSY (UPPER U CHANNEL)		
	5	5				76	601.3650	BOLT	AN3-15A	
REF			REF	REF	REF	75	647.5701	GPS MOUNT KIT	<div>3</div>	
2		2	2		2	74	601.1954	SCREW	MS27039-1-17	
	2	2		2	2	73	647.2010	UPPER STRUT		
	1	1		1	1	72	601.2045	RTV	LOCTITE 598	
1		1	1		1	71	600.1012	SEALANT	PR-1425 CLASS B	
1		1	1		1	70	600.0991	MAGNOBOND 6398 PART B		
1		1	1		1	69	600.0990	MAGNOBOND 6398 PART A		
4		4	4		4	68	601.3012	SCREW	MS27039-1-15	
2		2	2		2	67	601.3004	CAMLOC STUD		
2		2	2		2	66	601.3005	CAMLOC RETAINER		
2		2	2		2	65	601.3006	CAMLOC RECEPTACLE		
3 FT.		3 FT.	3 FT.		3 FT.	64	601.3011	P-SEAL		
1.1 FT.		1.1 FT.	1.1 FT.		1.1 FT.	63	601.3007	GROMMET	MS21266-2N	
2		2	2		2	62	601.3008	INSERT	NAS1834C-300	
11		11	11		11	61	601.2991	RIVET	CR3213-4-6	
2		2	2		2	60	601.1039	RIVET	CR3213-4-2	
8		8	8		8	59	601.1183	RIVET	CR3213-4-5	
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

BOM Table(Restructured)

22		22	22		22	58	601.0790	RIVET	CR3213-4-3	
8		8	8		8	57	601.2995	RIVET	CR3213-6-6	
4		4	4		32	56	601.1915	RIVET	CR3213-4-4	
12		12	12		12	55	601.2207	NUTPLATE RIVET	CCR264SS-3-03	
4		4	4		4	54	601.1983	NUTPLATE RIVET	CCR274SS-3-03	
12		12	12		12	53	601.2980	NUTPLATE RIVET	CCR264SS-3-04	
12		12	12		12	52	600.0795	NUTPLATE	MS21047-3	
	4	4		4	4	51	601.3209	LOCKNUT	MS21042L4	
5	4	9	5	4	9	50	601.2973	LOCKNUT	MS21042-08	
29	17	46	29	16	45	49	601.2943	LOCKNUT	MS21042-3	
3	3	3		3	48	601.2375	WASHER			
10	8	18	10	8	18	47	601.2764	WASHER	NAS1149FN832P	
	70	32	70	32	102	46	601.1607	WASHER	NAS1149F0332P	
1		1	1		1	45	601.2525	SCREW	MS27039-0807	
4		4	4		4	44	601.1952	SCREW	MS27039-1-20	
	4	4		4	4	43	601.3010	SCREW	MS27039-0810	
4		4	4		4	42	601.3224	SCREW	AN525-10R12	
6		6	6		6	41	601.1365	SCREW	MS27039-1-10	
3		3	3		3	40	601.2198	SCREW	MS27039-1-07	
3		3	3		3	39	601.2999	SCREW		
18		18	18		18	38	601.2459	SCREW	MS27039C1-06	
4		4	4		4	37	601.1622	SCREW	MS27039-1-14	
10		10	10		10	36	601.2051	SCREW	MS24694C52	
2		2	2		2	35	601.2823	BOLT	AN3-4A	
1		1	1		1	34	601.1324	BOLT	AN4CH6A	
	2	2		2	2	33	601.1874	BOLT	AN3C10A	
	12	12		16	16	32	601.2826	BOLT	AN3-11A	
8		8	8		8	31	601.2638	WASHER	NAS1149F0432P	
4		4	4		4	30	601.3002	BOLT	NAS6604-66	
2		2	2		2	29	647.1811	SPACER		
4		4	4		4	28	647.2511	NUT		
4		4	4		4	27	647.2510	SLEEVE		
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

BOM Table(Restructured)

ORIGINAL DATE (MO-DA-YR) 02-01-06

DRAWN BY R. ROSANO

CHECKER D. BARKER

DRAWING APPROVAL P. BRAVO 08/05/09

CONTRACT No.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:  
2 PLACE DECIMALS ±.03  
3 PLACE DECIMALS ±.010  
ANGLES ±.5°

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.

OCEANSIDE, CA. 92056-3512 (760)724-5300

EC145 CABLE CUTTERS KIT

SIZE B

CAGE CODE 07M26

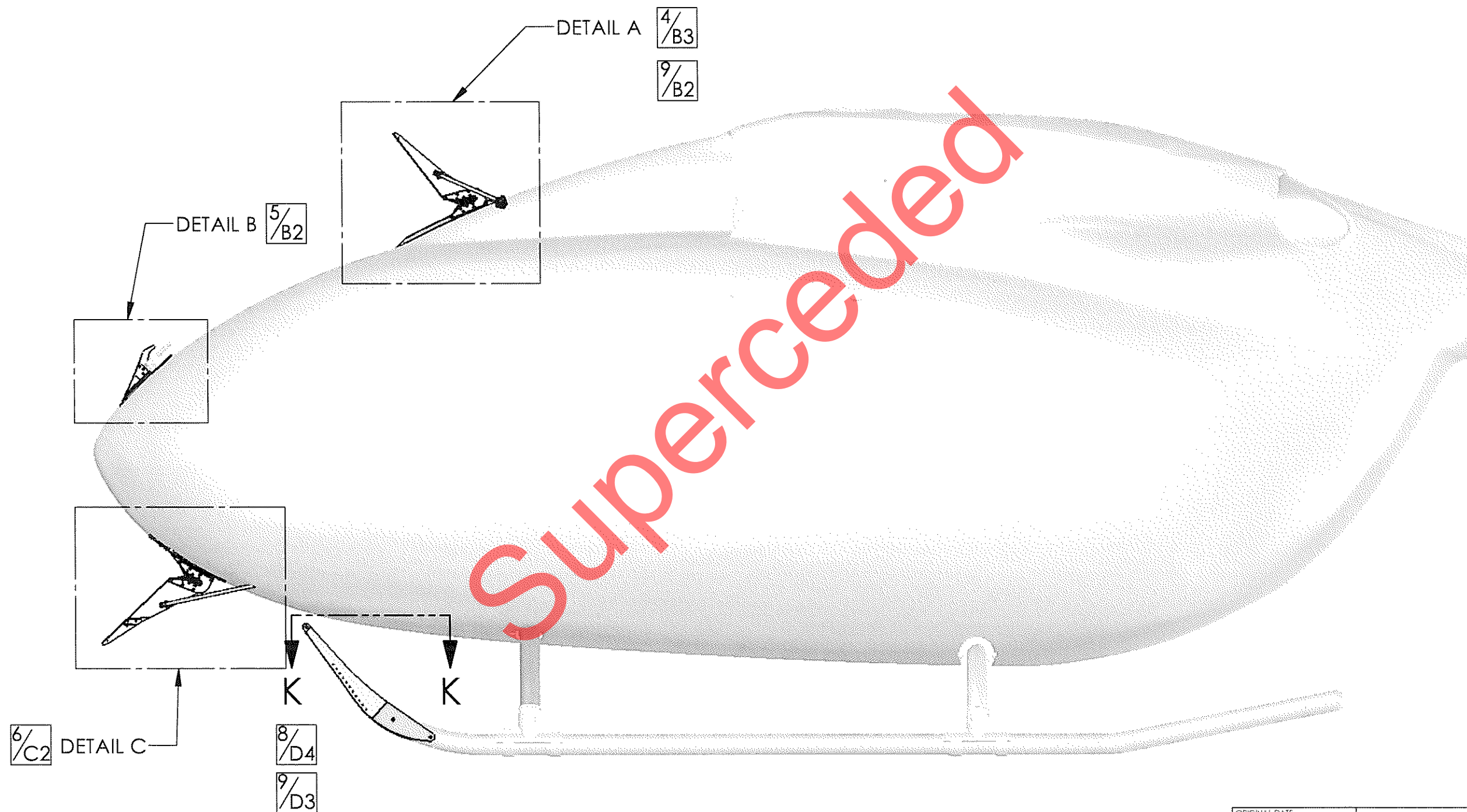
DWG. NO. 647.1300

REV. B

SCALE NONE

SHEET 2 OF 9

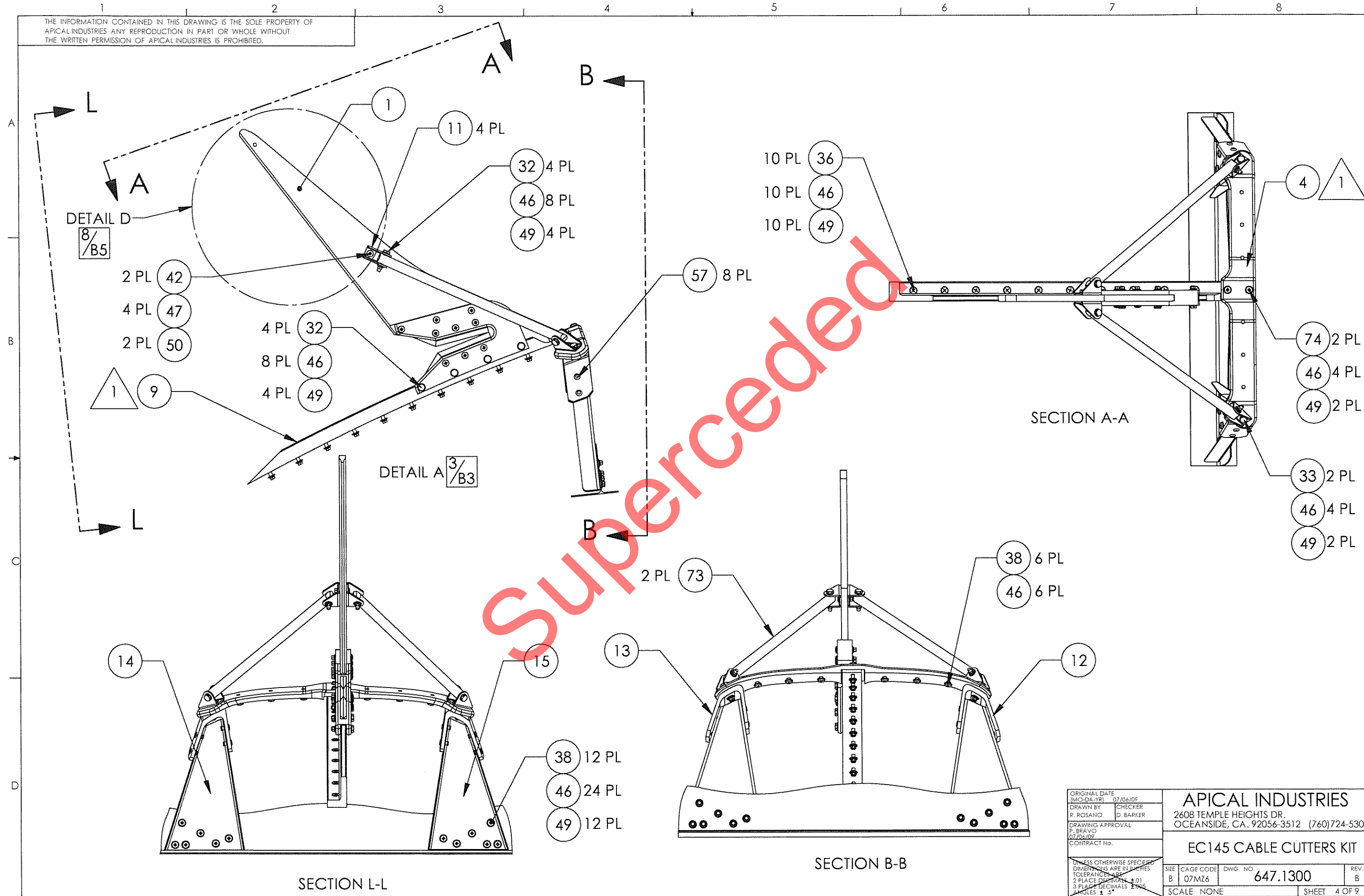
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ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSANO	CHECKER D. BARKER		
DRAWING APPROVAL P. BRAVO 07/06/09		EC145 CABLE CUTTERS KIT	
CONTRACT NO.		SIZE B	REV. B
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		DWG. NO. 647.1300	SHEET 3 OF 9
SCALE NONE			



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ORIGINAL DATE  
[MO-DA-YR] 07/06/09  
DRAWN BY  
R. ROSANO  
CHECKER  
D. BARKER  
DRAWING APPROVAL  
P. BRAVO  
07/06/09  
CONTRACT NO.

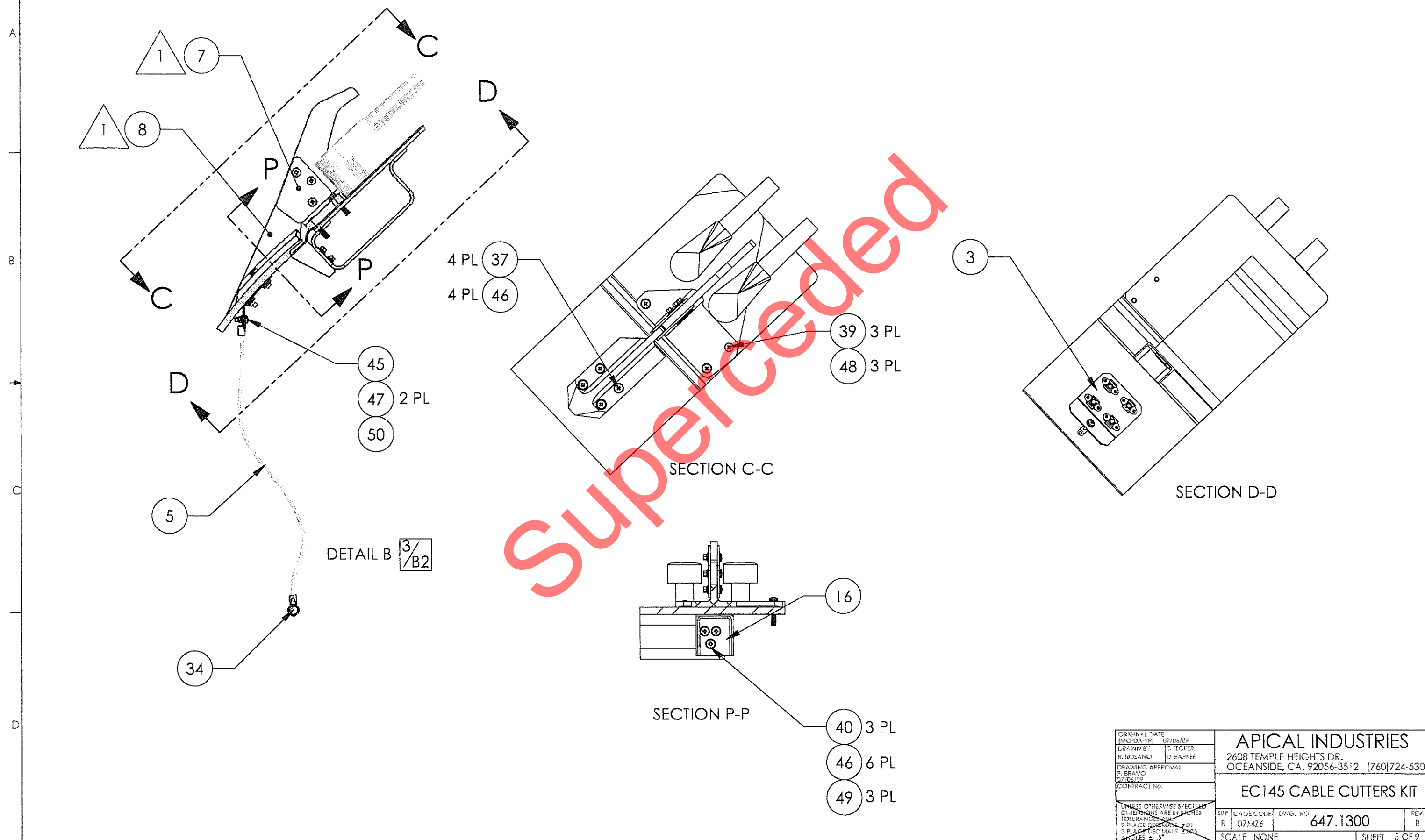
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS ±.01  
3 PLACE DECIMALS ±.005  
ANGLES ±.5°

APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300

EC145 CABLE CUTTERS KIT

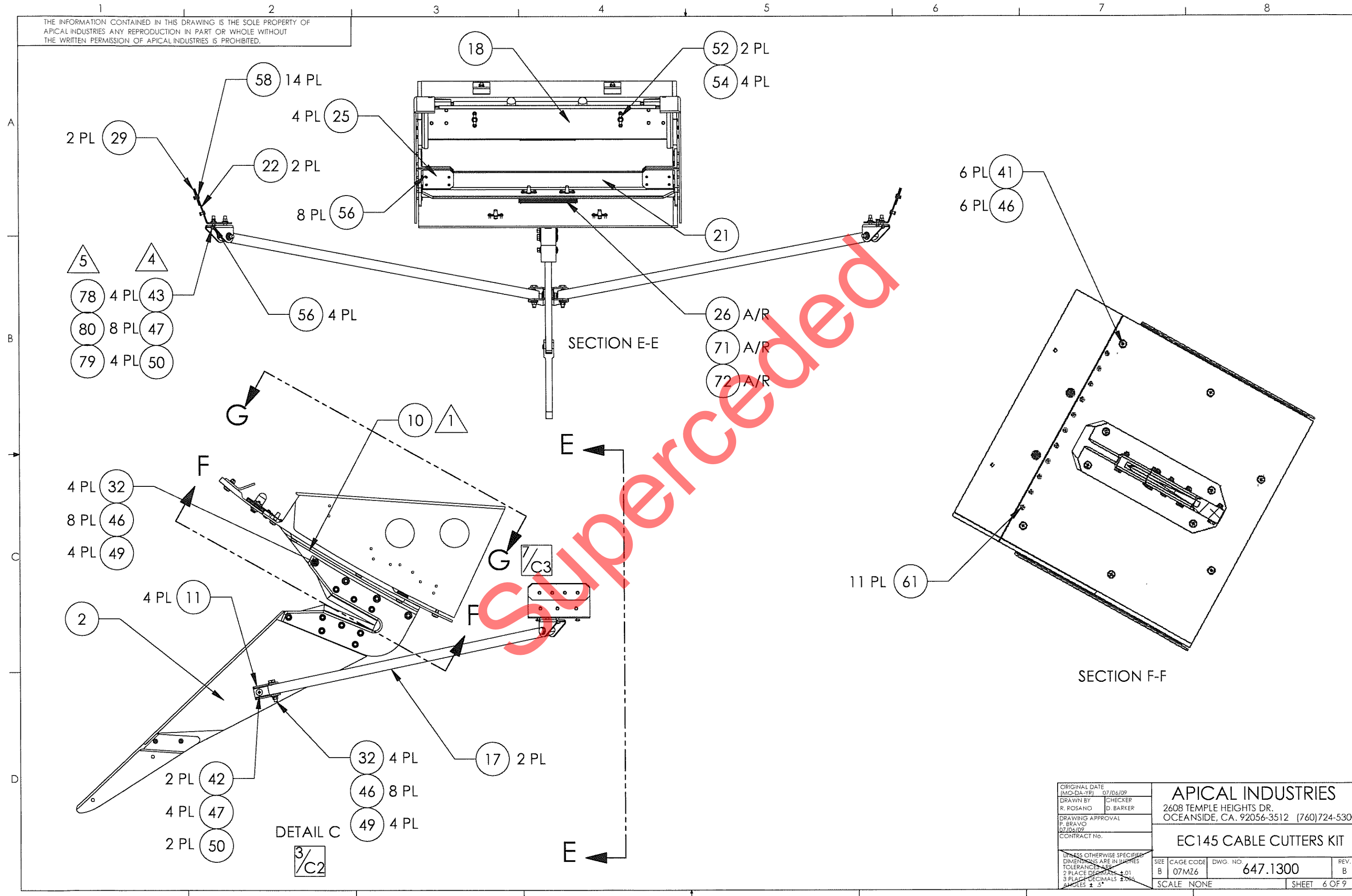
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B	07MZ6	647.1300	B
SCALE NONE			SHEET 4 OF 9

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ORIGINAL DATE (MO-DA-YR) 07/08/09		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSANO	CHECKER D. BARKER		
DRAWING APPROVAL P. BRAVO 07/08/09		EC145 CABLE CUTTERS KIT	
CONTRACT No.		SIZE B	REV. B
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		DWG. NO. 647.1300	SHEET 5 OF 9
SCALE NONE			

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ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES	
DRAWN BY R. ROSANO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKER D. BARKER		EC145 CABLE CUTTERS KIT	
DRAWING APPROVAL P. BRAVO		SIZE B	REV. B
07/06/09		DWG. NO. 647.1300	
CONTRACT NO.		SCALE NONE	SHEET 6 OF 9
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			

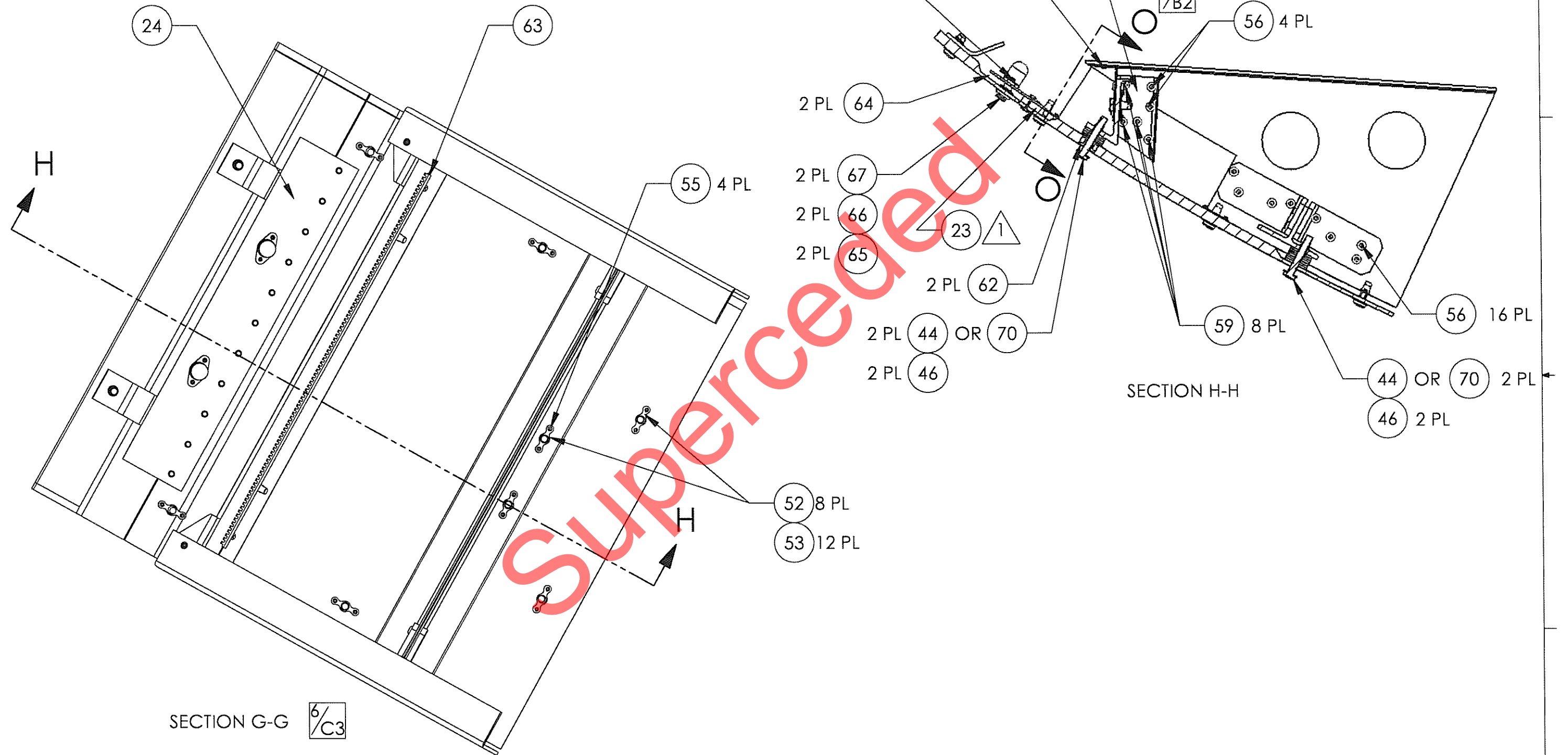
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A

B

C

D



ORIGINAL DATE  
(MO-DA-YR) 07/06/09  
DRAWN BY R. ROSANO  
CHECKER D. BARKER  
DRAWING APPROVAL  
P. BRAVO  
07/04/09  
CONTRACT No.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS  $\pm .01$   
3 PLACE DECIMALS  $\pm .005$   
ANGLES  $\pm .5^\circ$

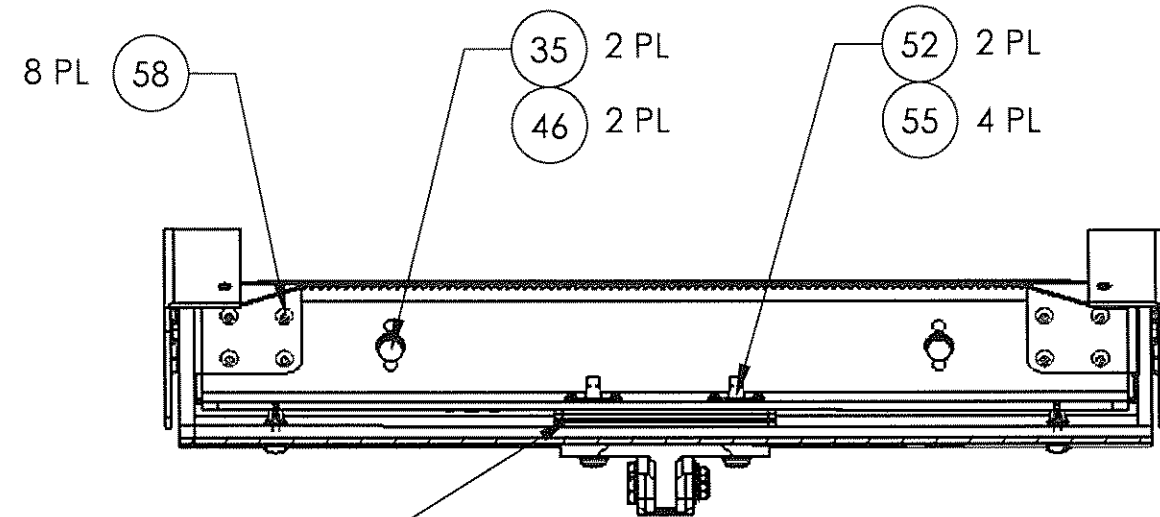
APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300

EC145 CABLE CUTTERS KIT

SIZE	CAGE CODE	DWG. NO.	REV.
B	07M26	647.1300	B
SCALE NONE			SHEET 7 OF 9

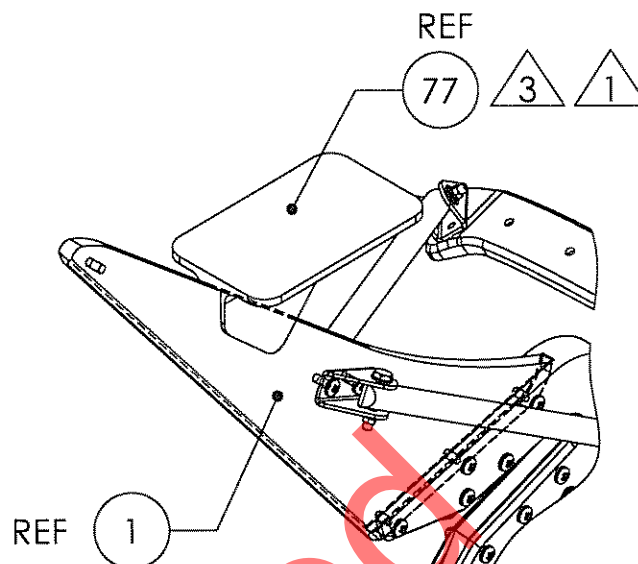


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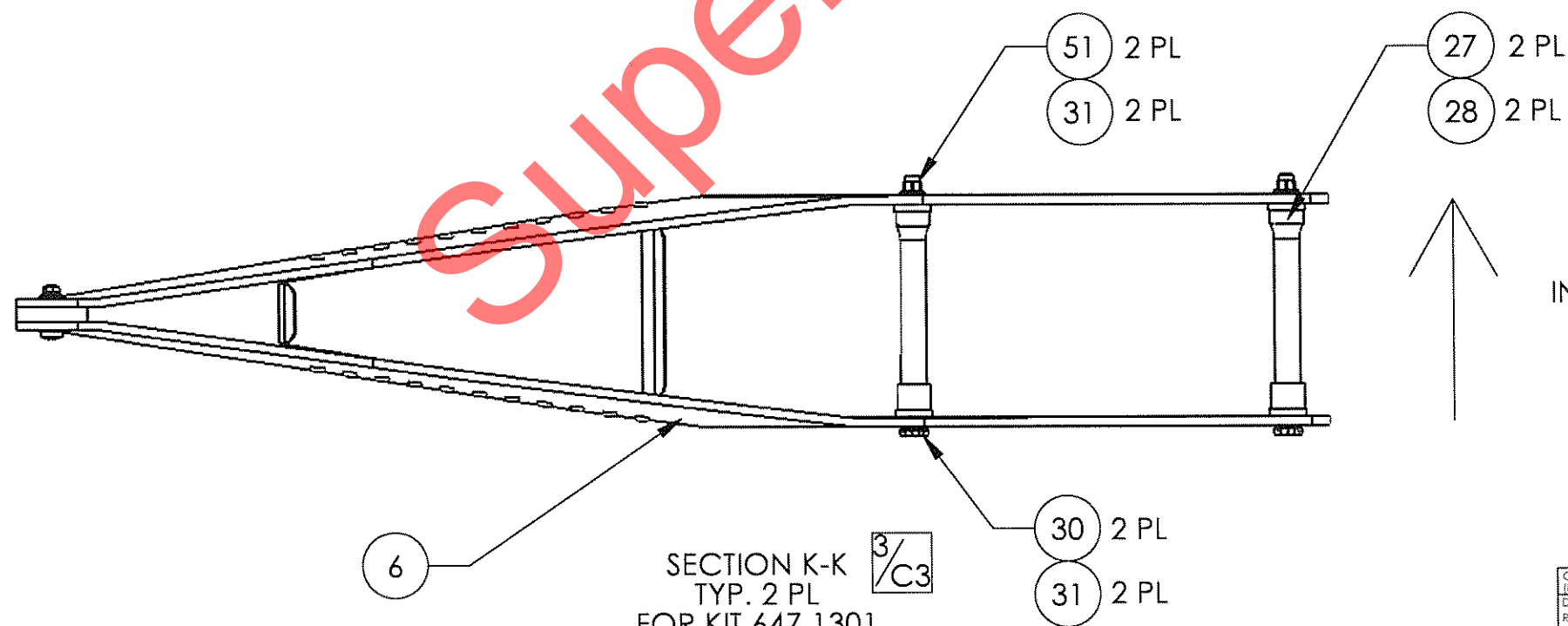


A/R (26)  
A/R (71)  
A/R (72)

SECTION O-O  $\frac{7}{A6}$



DETAIL D  $\frac{7}{A6}$   
SHOWN ISOMETRICALLY  
TYPICAL GPS MOUNT KIT INSTALLATION

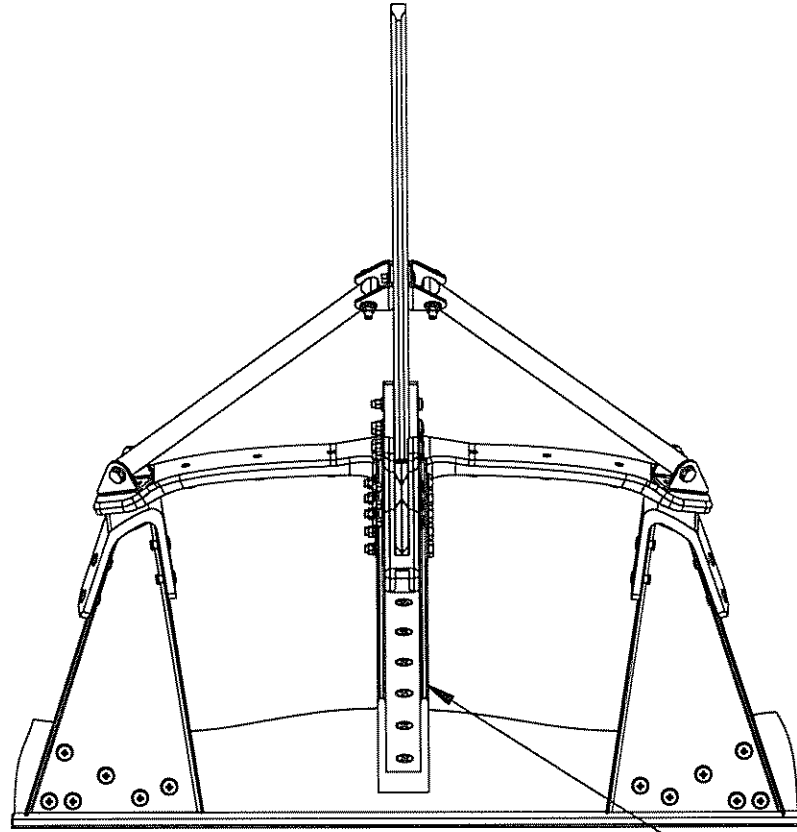


INBOARD

SECTION K-K  $\frac{3}{C3}$   
TYP. 2 PL  
FOR KIT 647.1301

ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES	
DRAWN BY R. ROSANO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKER D. BARKER		EC145 CABLE CUTTERS KIT	
DRAWING APPROVAL P. BRAVO		DWG. NO. 647.1300	
07/06/09		REV. B	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		SHEET 8 OF 9	

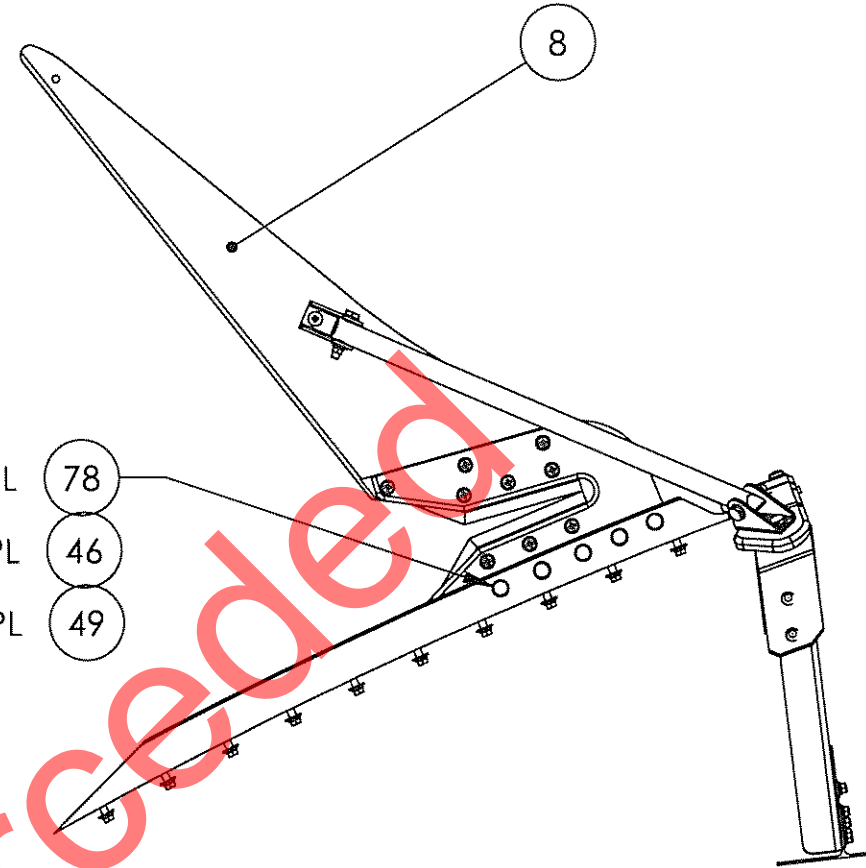
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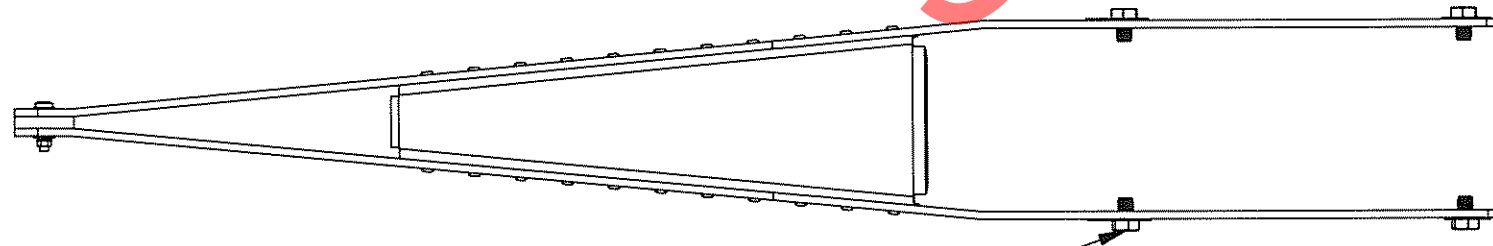
DETAIL A  
WITH U CHANNEL

3/B3

5 PL 78  
10 PL 46  
5 PL 49



10 4 PL



4 PL 9

647.1702  
DETAIL K  
ALTERNATE CONFIGURATION

3/D3

ORIGINAL DATE 10-04-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKER D. BARKER		EC145 CABLE CUTTERS KIT	
DRAWING APPROVAL P. BRAVO		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°	
CONTRACT No.		SIZE B	REV. B
		CAGE CODE 07MZ6	DWG. NO. 647.1300
		SCALE NONE	SHEET 9 OF 9